CHECKLIST FOR COMPLETED COMPREHENSIVE NUTRIENT MANAGEMENT PLAN

Prior to beginning a CNMP, all involved with the development of the plan ***must*** recognize that there may be a significant difference between the goal(s) and improvements identified in an overall plan and the limitations of a funding program such as EQIP. The identification of these differences is beyond the scope of this checklist. Assistance in understanding these potential differences can be obtained by contacting the State Program Manager. Section E of the CNMP shall include a listing of all the differences identified during the development of the final CNMP.

The completed CNMP shall address the following items as a minimum:

A. Facility Information (Facility Information Sheet)

- ❑ Name, address, and phone number(s) of the AFO
- ❑ Name of the owner and operator
- ❑ Tract, Farm, and Field Numbers
- ❑ Legal description of AFO
- ❑ Hydrologic unit code
- ❑ AU of the facility
- ❑ Total acres available for nutrient application owned or leased by the facility
- ❑ Date the CNMP was completed
- ❑ Name and Signatures of the Client, Certified Planner – CNMP, Certified Specialists – Manure and Wastewater Handling and Storage, Land Treatment Practices, Nutrient Management.

B. Safety and Emergency Action Plan

- ❑ Phone numbers for fire, ambulance, law enforcement, spill recovery, spill reporting, farm personnel
- ❑ Recovery equipment - what and where
- ❑ Action Plan for fire, personal injury, spills from containment structure, spills during pumping, spills during transport

C. Objectives and Resource Concerns (NM-ENV-1 – Environmental Assessment and Resource Inventory Checklist)

- ❑ Determine and state future goals and objectives of producer. An increase in herd size or the addition of a solid/liquid separator will change the nutrient balance on the facility. If future goals change the balance of the nutrient budgeting within the next five years, complete the comprehensive nutrient management plan for present and future conditions.
- ❑ State and address resource concerns on facility and land application sites.
- ❑ Consider runoff situation on facility; state final destination of drain ditches and canals, even if runoff from irrigation or storm events does not enter these waterways.

- ❑ Consider if stream section is water quality limited (TMDL segment), state the water bodies pollutants of concern.
- ❑ All environmental sensitive issues and concerns must be addressed in this section (i.e. surface water, bedrock, rock outcrops, wetlands)

D. Inventory, Analysis and Alternatives

1. Conservation Plan Map

- ❑ Milk barn, holding tank, feed storage
- ❑ Livestock housing and corrals
- ❑ Identify existing fences, waste structures, lagoon(s), separator(s), solid storage, ditches, buried or surface pipelines, runoff containment, corral slopes, berms with distinctive labels corresponding to text in the CNMP such as Existing Pond A, Existing Static Screen Separator, *et cetera*.
- ❑ Identify proposed structures with distinctive labels corresponding to text in the CNMP such as Proposed Pond B, Proposed Static Screen Separator, Proposed Dike 1, *et cetera*.
- ❑ Residences
- ❑ Property lines, if appropriate; boundary lines of planning unit, field boundaries, land use and acres for each land unit, appropriate map symbols and legend
- ❑ Road names
- ❑ Wells and/or well heads
- ❑ Monitoring wells
- ❑ Surface waters, surface/subsurface drains (direction of flow)
- ❑ Title block showing: "Conservation Plan Map", "Prepared with assistance from ___Name_____", Name of the conservation district, county and state, map scale, date prepared, North arrow
- ❑ Include a larger scale map showing a 1-mile radius surrounding facility, including all wells

2. Soil Information

- ❑ Prepare a soil map identifying map units.
- ❑ Prepare a copy of soil descriptions for map units shown.
- ❑ Identify land capability groupings, woodland suitability groups, pasture and hay land suitability groups, and other interpretive information regarding suitability for specific land uses.

3. NM CNMP Inventory Sheet, or equivalent to include:

- ❑ Name and location of facility
- ❑ Production information (also see Section E), including number, species, and breed of animals, average weight, number of days in system, phases of production, manure

volumes; consistency, location, and timing of the manure produced. The production estimates should include future expansion.

- ❑ Roof and/or Runoff Management
- ❑ Management of Dead Animals and Veterinary Wastes

Manure Collection, Storage, Treatment, and Transfer (also see Section E):

- ❑ Collection - Identify method of collection, location of the collection points, scheduling of the collection, labor requirements?, necessary equipment or structural facilities, and impact that collection has on the consistency of the waste. Report information on maintenance and cleaning of the milking parlor, including cow preparation for dairies.
- ❑ Storage - The storage period should be determined by the utilization schedule; the waste management system should identify the storage period; the required storage volume; the type, estimated size, and location of the storage facility; and the impact of the storage on the consistency of the waste.
- ❑ Treatment – include an analysis of the characteristics of the waste before treatment; a determination of the desired characteristics of the waste following treatment; and the selection of the type, estimated size, location.
- ❑ Transfer – include an analysis of the consistency of the waste to be moved, method of transportation, distance between points, frequency and scheduling, and necessary equipment.
- ❑ Manure Utilization – Describe how manure is and/or will be used, which may include as a source of energy, methane generation, composting, bedding, mulch, organic matter, or plant nutrients.

Land Application (also see Nutrient Management Job Sheet):

- ❑ A complete analysis of utilization through land application includes designing the distribution system and selecting necessary equipment.
- ❑ A nutrient management plan is to be developed to determine application rates and volumes; selecting the fields; scheduling applications; and sampling manure, soil, water, and plants.
- ❑ Individual field maps with marked setbacks, buffers, waterways
- ❑ Site evaluation
- ❑ Crop rotation
- ❑ Crops and yields
- ❑ Nutrient uptake
- ❑ Expected seasonal application rate and time
- ❑ Estimated land area requirement
- ❑ Nutrient utilization worksheet
- ❑ Irrigation system (also see Job Sheet 449) – describe how cropland is irrigated, including liquid waste application. Type of irrigation, set times, planned application amounts, frequency of irrigation, available water holding capacity and crop

management allowable depletion should be covered. Describe any changes to the irrigation system that may be necessary to address resource concerns.

- ❑ Grazing management (maintain a 3-in grazing height, about 1500 lbs/ac dry matter)

Feeding information

- ❑ Describe any measures that are or will be used to alter manure nutrient content through feed management such as phytase feeding, milk urea nitrogen testing.
- ❑ Summary of Recommendations for Alternative Practices

4. **Other Inventory Worksheets,** e.g. Phosphorus Index, Soil Conditioning Index (RUSLE2), Leaching Index, Dairy Pond Sizing Software, Wind Erosion Equation

E. Plan Summary of Decisions

1. **Plan Summary:**

- ❑ General System Description
- ❑ Decision maker's Responsibilities
- ❑ Recorded Decisions and Component Installation Schedule – include the appropriate land unit label, official practice name, brief description of the practice, and schedule of practice application in the proper sequence by calendar year
- ❑ Production Function Requirements
- ❑ Collection Function Requirements
- ❑ Treatment Function Requirements
- ❑ Storage Function Requirements
- ❑ Transfer Function Requirements
- ❑ Utilization Function Requirements
- ❑ Contingency Plan
- ❑ Public Protection
- ❑ Closure Plan
- ❑ Decision maker acknowledgement (signatures)

2. **Conservation Nutrient Management Plan**

- ❑ CNMP signed

3. **Contract Support Document (where applicable)**

F. Job Sheets

- ❑ Include all job sheets used to prepare the CNMP, such as Job Sheet 449 (Irrigation Water Management), 590 (Nutrient Management), 595 (Pest Management), 328 (Conservation Crop Rotation), 344 (Seasonal Residue Management), and 633 (Waste Utilization). DO NOT include job sheets to be developed during the design phase such as Job Sheets 313 (Waste Storage Facility), 356 (Waste Treatment Lagoon), 359, 362

(Diversion), 378 (Pond), 430 (Irrigation Water Conveyance - all), 521A (Pond Sealing or Lining, Flexible Lining), 587 (Structure for Water Control - all), and 634 (Manure Transfer). These job sheets will be included in the J. Design Documentation section after the design is completed.

- ❑ Worksheets developed with producer, such as resource impact summaries, forage inventories, erosion estimates, and cost estimates.

G. Operation and Maintenance

1. Reviews and Plan Modifications

- ❑ Dates of Review, including person performing the review and recommendations that resulted from the review
- ❑ Suggested modifications
- ❑ A revision may be necessary because of a change in objectives, size of the unit, livestock numbers, economics, weather conditions, etc.
- ❑ Based on the results of implementation, there also may be a need to look at additional alternatives if the results of plan implementation are not solving the identified problems or meeting the landowner's/operator's objectives.

2. Operation and Maintenance Procedures

- ❑ List of maintenance items to be done periodically to maintain system.

H. Recordkeeping

If a producer is to safely manage and assess his/her CNMP, it is critical he/she maintain a record of activities and the functionality of the system. A recordkeeping plan should be implemented that addresses key elements of the CNMP to aid in the proper application and provide for assessment documentation.

Where the CNMP is part of a permitting or other regulatory program, it is the responsibility of the producer to maintain any required documentation, including plans and implementation records, and make them available to the regulatory organization, if required.

- ❑ Current soils test results by field (in accordance with Nutrient Management 590)
- ❑ Land application records for each manure or commercial fertilizer application– dates, methods, rates; crops planted, planting and harvesting dates, yields; nutrient application equipment calibration.
- ❑ Manure, lagoon sampling results
- ❑ Transfer of manure off-site (Job Sheet 633) (manure N,P,K, and salinity content, amount of manure transferred, date of transfer, recipient of manure – name, address, phone)
- ❑ Available maps and sketches resulting from the planning process that will be useful to the producer in implementing the plan
- ❑ Environmental evaluations
- ❑ Monitoring well results

- ❑ Activities associated with emergency spill response plan
- ❑ Records associated with any reviews by NRCS, third-party consultants, or representatives of regulatory agencies (dates of review, name of reviewer and purpose of the review, recommendations or follow-up requirements resulting from the review, actions taken as a result of the review)
- ❑ Records of maintenance performed associated with operation and maintenance plans
- ❑ Changes made in CNMP

I. Permits, if applicable:

- ❑ NPDES CAFO
- ❑ Groundwater Discharge
- ❑ Inspection records
- ❑ Operator Certification
- ❑ Manager Certification
- ❑ Water Rights

J. Documentation for Design Phase:

1. Items to be Forwarded to Designer:

- ❑ Include available maps, sketches, and preliminary designs resulting from the planning process that may be useful to the engineer in the design of practices.
- ❑ If a land survey was completed, provide a hard copy and an electronic copy of raw survey data. The coordinates of benchmarks, well corners, hydrant bonnets, concrete slabs, separators, and other permanent elements are to be reported. Coordinates should be latitude/longitude, UTM, or state plane coordinates. If a local coordinate system was used (such as 5,000N and 10,000E), the benchmarks used must be in the local coordinate system AND if possible, locate the benchmarks using a survey grade GPS and report the latitude/longitude, UTM, or state plane coordinates. Identify the vertical datum used for surveys.
- ❑ Provide a definition of all abbreviations used for survey (point code terminology such as GRD, TOPLAG, FNC, *et cetera*), features on sketches or drawings (such as WRL, CSL, MW, *et cetera*), and text.
- ❑ If a land survey was not conducted, sketch the proposed improvements (such as a waste storage pond, a storm runoff pond, *et cetera*) with measurements identifying the distance from the corners of the proposed work to easily located permanent structures. The measurements could be achieved using a tape, chain, electronic device, *et cetera*.
- ❑ Provide electronic versions of maps using ARC View or AutoCAD if possible. The use of AutoCAD is preferable.
- ❑ Identify all known or supposed utilities -- public or private -- in all areas where improvements may be installed.
- ❑ Provide documentation of soils/geologic information, if any is available.

- ❑ A geotechnical investigation of the sites for all ponds will be necessary during the design effort. If the landowner is currently using the area to grow crops, verify that the driller/backhoe operator has permission to enter the area and that crops may be lost.

2. Items to be prepared by the Designer for Design Approval

- ❑ Construction Drawings
  - o Title sheet with Index of Drawings & Construction Specifications
  - o Location maps so you can drive to the site
  - o Entire dairy plan view with features identified including the project area
  - o Project plan view preferably with contour lines and geologic investigation locations
  - o Cross-Sections and profiles with existing ground and excavation limits
  - o Details of pipes, vents, water level marker, concrete and/or steel etc.
  - o Fencing plan view, details and signage
  - o Geologic cross-sections with legend
  - o Others as needed
- ❑ Construction Specifications
- ❑ Design Engineer's Report
- ❑ Construction Practice Job Sheets